

CLAIMS

We claim:

1. An upholstery construction for a mattress or an article of furniture, comprising:
a fabric layer having a front surface and a back surface ;
5 a flame barrier foam sheet proximate to the back surface of the fabric layer,
wherein said flame barrier foam sheet comprises a polyurethane foam sheet that is coated
or impregnated with a coating of one or more binders and one or more flame retardants,
and dried, further wherein said flame barrier foam sheet after it has been coated or
impregnated and dried has a density of in the range of about 1.0 to 6.0 pcf and an
10 compression force deflection (CFD₂₅) of in the range of about 0.1 to 0.4 psi.
2. The upholstery construction of claim 1, wherein the flame barrier foam sheet is adjacent
to the back surface of the fabric layer.
3. The upholstery construction of claim 1, wherein the upholstery construction is quilted
such as by stitching together the flame barrier foam sheet and fabric layer in combination with
15 one or more other layers.
4. The upholstery construction of claim 1, wherein the binder in the coating has a glass
transition temperature (T_g) of less than about 10°C.
5. The upholstery construction of claim 1, wherein the binder in the coating has a glass
transition temperature (T_g) of less than about 0°C.
- 20 6. The upholstery construction of claim 1, wherein the coated or impregnated flame barrier
foam sheet has a density of from about 2.0 to about 4.5 pcf.
7. The upholstery construction of claim 1, wherein the binder in the coating is selected from
the group consisting of: acrylic latex, natural rubber latex, polyvinyl chloride copolymers,
ethylene vinyl chloride copolymers, vinyl acetate, vinylidene chloride copolymers, vinyl acetate
25 ethylene copolymers, neoprene, acrylonitrile, polychloroprene, polyurethane, and mixtures

thereof.

8. The upholstery construction of claim 1, wherein the binder in the coating has a chlorine content of at least about 20% on a dry weight basis.

9. The upholstery construction of claim 1, wherein the flame retardant in the coating is selected from the group consisting of: melamine, a melamine derivative, aluminum trihydrate, polyvinyl chloride, antimony oxide, expandable graphite, magnesium hydroxide, urea, an amino phosphorous compound such as ammonium polyphosphate, and mixtures thereof.

10. The upholstery construction of claim 9, wherein the coating further comprises a liquid flame retardant.

11. The upholstery construction of claim 1, wherein the flame barrier foam sheet prior to being coated or impregnated has a density of less than about 1.5 pcf and an indentation force deflection (IFD₂₅) of about 15 lb-force or less.

12. The upholstery construction of claim 1, further comprising: a second foam sheet installed proximate to the flame barrier foam sheet.

13. The upholstery construction of claim 12, wherein the second foam sheet is installed adjacent to the flame barrier foam sheet and between the flame barrier foam sheet and a backing sheet.

14. The upholstery construction of claim 1, wherein the flame barrier sheet resists yellowing when exposed to ultraviolet light.

15. The upholstery construction of claim 1, wherein the flame barrier sheet resists yellowing when exposed to one or more NO_x gases.

16. A mattress or article of upholstered furniture incorporating the upholstery construction of claim 1.

17. A mattress or article of upholstered furniture incorporating the upholstery construction of claim 13.